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March 3, 2006

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Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**Art Unit 2688**

**Attn: Mail Stop Amendment**

Re: U.S. Utility Patent Application  
Appl. No. 10/086,367; Filed: March 4, 2002  
For: **Method and System for Frequency Up-Conversion**  
Inventors: **SORRELLS et al.**  
Our Ref: 1744.0020007

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Fourth Supplemental Information Disclosure Statement;
2. A listing of the cited documents on Form PTO-1449 (3 pages);
3. Copies of the cited documents (AJ24-AM24, AJ25-AL25, AN60-AR60, AN61, AO61); and
4. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents  
March 3, 2006  
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

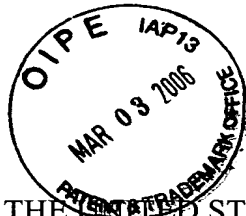
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Jeffrey S. Weaver", followed by a horizontal line.

Jeffrey S. Weaver  
Attorney for Applicants  
Registration No. 45,608

MQL/JSW:apg  
Enclosures

503582\_1.DOC



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SORRELLS *et al.*

Appl. No.: 10/086,367

Filed: March 4, 2002

For: **Method and System for Frequency  
Up-Conversion**

Confirmation No.: 3679

Art Unit: 2688

Examiner: Bhattacharya, Sam

Atty. Docket: 1744.0020007

**Fourth Supplemental Information Disclosure Statement**

***Mail Stop Amendment***

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Fourth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Third Supplemental Information Disclosure Statement filed on October 11, 2005 in connection with the above-captioned application.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Document AJ24 was cited in a search report in related European Patent Application No. 04020115.4, filed October 6, 2000, entitled "Down Converter Using Subsampling," directed to related subject matter. Also cited in said search report were U.S. Patent Nos. 5,454,007; 5,705,949; and 5,883,548, PCT Publication Nos. WO 94/05087 and WO 98/40968, German Patent Nos. DE 35 41 031 A and DE 197 35 798 C, and Fest, Jean-Pierre, "Le Convertisseur A/N Revolutionne Le Recepteur Radio," *Electronique*, JMJ (Publisher), No. 54, pp. 40-42 (December 1995), which have already been cited in the present application.

Documents AK24 and AE71 were cited in an Office Action in related European Patent Application No. 01977965.1, filed May 16, 2001, entitled "Apparatus, System, and Method for Down converting and Up converting Electromagnetic Signals," directed to related subject matter. Also cited in said search report were U.S. Patent Nos. 5,564,097 and 5,640,698; PCT Publication No. WO 96/02977; and Rudell, J.C. *et al.*, "A 1.9-Ghz Wide-Band IF Double Conversion CMOS Receiver for Cordless Telephone Applications," *IEEE Journal of Solid-State Circuits*, IEEE, Vol. 32, No. 12, pp. 2071-2088 (December 1997), which have already been cited in the present application.

Documents AL24, AM24, AJ25-AL25, and AF71 were cited in an Office Action in related Israel Patent Application No. 142,699, filed October 18, 1999, entitled "Method and System for Frequency Up-Conversion," directed to related subject matter. Also cited in said Office Action was European Patent Publication No. EP 0 548 542, which has already been cited in the present application.

Documents AN60 and AD71 were cited in an Office Action in related U.S. Patent Application No. 10/197,253, filed July 18, 2002, entitled "Networking Methods and Systems," directed to related subject matter.

Documents AE69-AI69 were cited in an Office Action in related U.S. Patent Application No. 10/197,255, filed July 18, 2002, entitled "Networking Methods and Systems," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 6,850,742, which has already been cited in the present application.

Documents AA70, AA71, and AG71 are co-owned patents which are directed to related subject matter.

Documents AB70 and AC70 were cited in an Office Action in related U.S. Patent Application No. 09/569,045, filed May 10, 2000, entitled "Methods And Apparatuses Relating To A Universal Platform Module And Enabled By Universal Frequency Translation Technology," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,844,868, which has already been cited in the present application.

Documents AD70-AI70 were cited in a Notice of Allowance in related U.S. Patent Application No. 10/961,272, filed October 12, 2004, entitled "Apparatus, System, And Method For Down-Converting And Up-Converting Electromagnetic Signals," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 6,853,690, which has already been cited in the present application.

Documents AB71 and AC71 were cited in an Office Action in related U.S. Patent Application No. 09/550,644, filed April 14, 2000, entitled "Method And System For Down-

Converting An Electromagnetic Signal, Transforms For Same, And Aperture Relationships," directed to related subject matter.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below:

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a

counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$\_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☒ 6. A concise explanation of the relevance of the non-English language document appears below in accordance with 37 C.F.R. § 1.98(a)(3):
- Document AK24 (DE 1936252) appears to describe a modulator or demodulator in integrated technology. An English language translation of document AK24 is enclosed as document AO60.
- Document AL24 (JP 62-12381) appears to describe a pulse-width modulation control system of an inverter. An English language abstract of document AL24 is enclosed as document AP60.

Document AM24 (JP 4-154227) appears to describe a relay monitoring device for broadcasting radio waves. An English language abstract of document AM24 is enclosed as document AQ60.

Document AJ25 (JP 6-284038) appears to describe a transceiver. An English language abstract of document AJ25 is enclosed as document AR60.

Document AK25 (JP 10-96778) appears to describe a distance measuring device. An English language abstract of document AK25 is enclosed as document AN61.

Document AL25 (JP 11-98206) appears to describe a demodulator for digital radio communication. An English language abstract of document AL25 is enclosed as document AO61.

- ☒ 7. Copies of documents AJ24-AM24, AJ25-AI25, AN60-AR60, AN61, and AO61 are enclosed. However, in accordance with 37 C.F.R. § 1.98(a)(2), copies of the U.S. patents and patent publications cited on the attached Form PTO-1449 are not enclosed.
- ☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).
- ☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 09/379,497, filed August 23, 1999 (now U.S. Pat. No. 6,353,735), and 09/176,154, filed October 21, 1998 (now U.S. Pat. No. 6,091,940), in accordance with MPEP 2001.06(b), and indicate in the next communication from

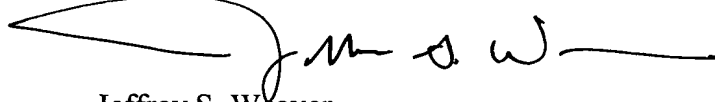
the office that the art cited in the earlier prosecution histories has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read 'J. M. S. W.', is written over a horizontal line.

Jeffrey S. Weaver  
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Date: 3-3-06

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FORM PTO-1449

**FOURTH SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT**ATTY. DOCKET NO.  
1744.0020007APPLICATION NO.  
10/086,367FIRST NAMED INVENTOR  
David F. SORRELLSFILING DATE  
March 4, 2002ART UNIT  
2688**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE69	5,703,584	12/1997	Hill			
	AF69	5,887,001	03/1999	Russell			
	AG69	6,298,065 B1	10/2001	Dombkowski <i>et al.</i>			
	AH69	2002/0080728 A1	06/2002	Sugar <i>et al.</i>			
	AI69	2002/0163921 A1	11/2002	Ethridge <i>et al.</i>			

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ24	WO 98/53556 A2	11/1998	PCT			N/A
	AK24	DT 1936252	01/1971	DT			Yes (Doc. AO60)
	AL24	JP 62-12381	01/1987	JP			No
	AM24	JP 4-154227	05/1992	JP			No

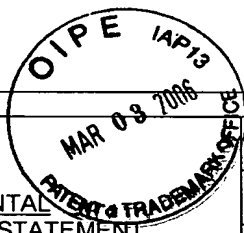
**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

EXAMINER INITIAL	DOC. REF.	CITATION
	AN60	Gaudiosi, J., "Retailers will bundle Microsoft's Xbox with games and peripherals," <i>Video Store Magazine</i> , Volume 23, Issue 36, pg. 8, 2 pages (September 2-8, 2001).
	AO60	English-language Translation of German Patent Publication No. DT 1936252, translation provided by Transperfect Translations, 12 pages (January 28, 1971 - Date of publication of application).
	AP60	English-language Abstract of Japanese Patent Publication No. JP 62-12381, data supplied by the espacenet, 1 page (January 21, 1987 - Date of publication of application).
	AQ60	English-language Abstract of Japanese Patent Publication No. JP 4-154227, data supplied by the espacenet, 1 page (May 27, 1992 - Date of publication of application).
	AR60	English-language Abstract of Japanese Patent Publication No. JP 6-284038, data supplied by the espacenet, 1 page (October 7, 1994 - Date of publication of application).

EXAMINER

DATE CONSIDERED

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA70	6,963,734 B2	11/2005	Sorrells <i>et al.</i>			
	AB70	6,005,506	12/1999	Bazarjani <i>et al.</i>			
	AC70	6,438,366 B1	08/2002	Lindfors <i>et al.</i>			
	AD70	5,196,806	03/1993	Ichihara			
	AE70	5,410,195	04/1995	Ichihara			
	AF70	6,404,823 B1	06/2002	Grange <i>et al.</i>			
	AG70	6,618,579 B1	09/2003	Smith <i>et al.</i>			
	AH70	2001/0015673 A1	08/2001	Yamashita <i>et al.</i>			
	AI70	2003/0045263 A1	03/2003	Wakayama <i>et al.</i>			

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ25	JP 6-284038	10/1994	JP			No
	AK25	JP 10-96778	04/1998	JP			No
	AL25	JP 11-98206	04/1999	JP			No
	AM						Yes No

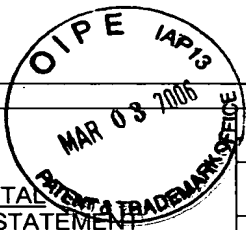
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER INITIAL	DOC. REF.	CITATION
	AN61	English-language Abstract of Japanese Patent Publication No. JP 10-96778, data supplied by the espacenet, 1 page (April 14, 1998 - Date of publication of application).
	AO61	English-language Abstract of Japanese Patent Publication No. JP 11-98205, data supplied by the espacenet, 1 page (April 9, 1999 - Date of publication of application).
	AP	
	AQ	
	AR	

EXAMINER

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA71	6,975,848 B2	12/2005	Rawlins <i>et al.</i>			
	AB71	6,404,758 B1	06/2002	Wang			
	AC71	6,909,739 B1	06/2005	Eerola <i>et al.</i>			
	AD71	6,910,015 B2	06/2005	Kawai			
	AE71	3,719,903	03/1973	Goodson			
	AF71	4,591,930	05/1986	Baumeister			
	AG71	7,006,805 B1	02/2006	Sorrells <i>et al.</i>			
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ						Yes No
	AK						Yes No
	AL						Yes No
	AM						Yes No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER INITIAL	DOC. REF.	CITATION
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	AO	
	AP	
	AQ	
	AR	

EXAMINER

DATE CONSIDERED

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